



-

Freq(Hz)	2.4G	2.45G	2.4835G
Ant. 1 Max Gain (dBi)	4.6	4.82	4.21
Ant. 2 Max Gain (dBi)	2.28	2.32	2.08
Ant. 3 Max Gain (dBi)	3.99	3.32	3.68
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/75/0	Phi/75/0	Phi/75/352.5
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/135/240	Phi/150/240	Phi/150/240
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/45/262.5	Phi/82.5/270	Phi/82.5/270
Max Gain (dBi)	4.6	4.82	4.21
DG [1SS] (dBi)	5.3	4.85	4.71
DG [2SS] (dBi)	4.6	4.82	4.21

DG 1SS Result

[illegible]



Radiated Composite Gain Data of 2.4GHz

Appendix A

Θ(22.5°)	0.7/0.98	1.29/1.51	1.54/1.42	1.25/0.94	0.46/-0.3	-1.29/-2.5	-3.27/-3.22	-2.97/-2.63	-2.23/-1.65	-1.06/-0.33	0.48/1.31	1.93/2.33	2.51/2.53	2.38/2.14	1.83/1.44	0.97/0.36	-0.48/-1.46	-2.63/-3.44	-3.23/-2.59	-1.76/-0.9	-0.10/0.53	0.81/0.82	0.68/0.49	0.35/0.36
Θ(30°)	0.83/0.94	1.13/1.31	1.37/1.36	1.28/1.18	0.89/0.32	-0.48/-1.45	-2.51/-3.03	-2.93/-2.59	-2.17/-1.6	-0.88/0.06	0.73/1.3	1.71/1.99	2.09/2.06	1.99/1.86	1.66/1.38	0.97/0.5	-0.16/-0.99	-1.77/-2.25	-2.15/-1.73	-1.15/-0.55	0.02/0.48	0.83/1.02	0.99/0.84	0.69/0.56
Θ(37.5°)	1.27/1.26	1.21/1.18	1.11/1.08	1.16/1.23	1.22/1.01	0.62/0.03	-0.82/-1.53	-1.45/-1.15	-0.94/-0.76	-0.41/0.08	0.57/1.03	1.41/1.68	1.81/1.84	1.81/1.71	1.51/22	0.87/0.54	0.2/-0.14	-0.44/-0.56	-0.37/0.01	0.31/0.43	0.38/0.29	0.36/0.53	0.68/0.73	0.83/0.89
Θ(45°)	1.42/1.39	1.19/0.9	0.56/0.3	0.28/0.6	0.93/1.12	1.09/0.88	0.41/0.02	0.32/0.63	0.59/0.3	-0.1/-0.12	0.26/0.71	1.09/1.38	1.49/1.51	1.47/1.37	1.21/0.8	1.04/1.1	1.17/1.13	1.15/1.12	1.27/1.55	1.76/1.82	1.72/1.52	1.26/0.95	0.73/0.62	0.76/0.96
Θ(52.5°)	1.67/1.92	1.95/1.7	1.24/0.72	0.36/0.26	0.24/0.02	-0.3/-0.63	-0.93/-0.88	0.16/0.93	1.17/0.9	0.4/0.33	0.45/1	1.38/1.51	1.39/1.2	1.17/1.18	1.09/1.08	1.14/1.26	1.21/1.05	0.9/0.8	0.96/1.23	1.57/1.91	2.18/2.31	2.26/1.96	1.42/0.85	0.77/1.15
Θ(60°)	2.49/3.06	3.29/3.25	3/2.61	2.23/1.97	1.58/0.84	0.02/-0.58	-0.8/-0.45	0.59/1.69	2.13/1.93	1.46/0.97	0.96/1.05	1.32/1.15	0.54/0.01	0.26/0.61	0.56/0.33	0.33/0.34	0.49/0.45	0.1/-0.33	-0.37/0.01	0.59/1.12	1.56/1.93	2.13/1.99	1.45/0.74	0.51/1.42
Θ(67.5°)	2.76/3.57	3.79/3.69	3.32/2.82	2.33/2.08	1.91/1.67	1.19/0.75	0.49/0.76	1.39/2.23	2.57/2.39	1.98/1.53	0.93/0.75	0.53/-0.22	-1.06/-0.5	0.38/0.76	0.78/0.57	0.37/0.72	1.29/1.49	1.13/0.56	0.33/0.49	0.87/1.14	1.23/1.29	1.41/1.39	1.09/0.59	0.4/1.3
Θ(75°)	2.26/3.21	3.56/3.5	3.15/2.7	2.45/2.64	2.92/2.91	2.62/2.19	1.69/1.69	1.59/1.56	1.12/0.48	0.03/-0.05	0.1/0.17	-0.34/-1.64	-2.76/-1.36	-0.12/0.67	1.13/1.31	1.45/1.79	2.2/2.38	2.34/2.21	2.07/1.85	1.57/1.23	0.88/0.68	0.73/0.83	0.74/0.51	0.42/1.16
Θ(82.5°)	1.85/2.56	3.03/3.32	3.52/3.69	3.99/4.44	4.68/4.4	3.72/3.05	2.43/2.18	2.04/1.96	1.47/0.68	0.04/-0.06	0.34/0.22	-0.6/-2.07	-2.2/-0.82	0.31/0.95	1.16/1.15	1.41/1.85	2.25/2.68	3.06/3.15	2.96/2.63	2.26/1.99	1.85/1.86	1.91/1.87	1.53/0.76	0.49/0.97
Θ(90°)	0.88/0.58	0.27/0.52	1.26/2.17	3.08/4.15	4.71/4.44	3.41/2	0.74/0.03	0.05/0.31	0.28/0.23	0.22/0.15	0.13/0.43	-1.58/-3.07	-3.24/-1.89	-0.82/-0.25	-0.05/-0.02	0.37/1.08	1.97/2.84	3.25/3.1	2.81/2.82	3.09/3.51	3.76/3.68	3.39/3	2.47/1.67	0.58/0.51
Θ(97.5°)	0.38/0.03	-0.51/-0.65	0.07/1.27	2.21/3.5	4.29/4.34	3.75/2.87	2.03/1.4	0.94/0.61	0.05/-0.11	-0.24/0.1	0.28/-0.23	-1.44/-3.14	-3.59/-2.9	-2.26/-1.65	-1.07/-0.57	0.07/1	2.04/2.79	2.84/2.33	2.19/2.55	3.03/3.44	3.42/2.97	2.33/1.63	0.97/0.39	-0.34/-0.23
Θ(105°)	0.26/0.44	0.27/-0.11	0.22/0.91	1.45/2.64	3.63/3.98	3.58/2.82	2.04/1.28	0.33/-1.1	-3.18/-3.85	-2.56/-1.71	-1.29/-1.58	-3.08/-4.59	-4.21/-3.34	-2.42/-1.51	-1.13/-1.2	-1.34/-0.88	0.05/0.91	1.12/0.88	1.17/1.89	2.48/2.73	2.58/2.19	1.76/1.13	0.1/-0.78	-0.8/-0.6
Θ(112.5°)	-0.07/0.68	0.82/0.31	0.74/1.36	1.11/0.71	1.87/2.72	2.69/2.06	1.35/0.82	0.47/0.2	-0.11/-0.55	-0.74/-0.43	-0.24/-1.18	-2.97/-3.45	-3.15/-2.88	-2.37/-2.45	-3.64/-4.81	-4.9/-2.63	-0.56/0.2	-0.19/-1.35	-2.43/-1.74	-0.44/0.76	1.22/1.13	0.88/0.34	-0.68/-1.49	-1.5/-1.11
Θ(120°)	0.03/0.47	0.59/-0.02	0.39/1.37	1.35/0.31	-1.11/-1.48	-1.04/-0.93	-0.71/-0.15	0.55/0.8	0.3/-0.66	-1.33/-1.39	-2.06/-4.4	-6.17/-4.66	-3.69/-3.67	-3.43/-4.39	-6.47/-6.37	-3.24/0.13	2.01/2.57	2.26/1.64	1.25/1.21	1.56/2	1.86/0.89	-0.37/-1.4	-2.6/-3.13	-1.69/-0.68
Θ(127.5°)	2.66/2.44	1.88/1.03	-0.39/-1.17	-0.56/-0.81	-1.54/-1.73	-1.09/-0.17	0.51/0.87	0.81/0.11	-1.33/-2.66	-2.88/-3.11	-4.66/-6.32	-5.97/-4.66	-4.77/-5.13	-5.12/-5.93	-7.91/-4.66	-0.71/72	3.04/3.38	3.07/2.53	1.89/1.14	0.51/0.1	-0.46/-1.64	-2.84/-3.28	-3.25/-1.48	0.67/2/03
Θ(135°)	2.58/2.38	2.08/1.46	0.1/-1.56	-1.08/-0.63	-1.31/-2.24	-2.4/-2.15	-2.14/-2.64	-3.79/-5.17	-5.65/-4.7	-4.24/-4.73	-4.69/-3.88	-2.36/-1.9	-2.57/-3.49	-4.15/-5.08	-6.17/-4.7	-1.53/0.63	1.61/1.83	1.56/1.28	0.77/-0.37	-1.78/-3.01	-3.84/-4.3	-3.57/-2.94	-2.88/-1.76	0.19/1.71
Θ(142.5°)	0.28/0.41	0.42/0.15	-0.74/-1.58	-0.36/0.62	0.72/0.16	-0.73/-1.68	-2.52/-3.12	-0.71/-0.58	-1.98/-1.87	-2.46/-3.2	-3.65/-2.78	-1.93/-1.98	-2.72/-4	-5.49/-6.3	-5.29/-2.96	-0.79/0.72	1.52/1.69	1.79/1.56	1.27/0.56	-0.39/-1.46	-1.94/-2	-1.75/-1.52	-1.48/-1.46	-1.22/-0.56
Θ(150°)	-1.22/-1.12	-1.11/-1.28	-1.81/-2.8	-2.67/-1.26	-0.32/0.03	-0.08/-0.38	-0.66/-0.83	-0.91/-0.96	-1.24/-1.89	-2.82/-3.45	-3.61/-4.22	-4.61/-5.44	-7.09/-9.57	-10.88/-8.71	-5.15/-2.31	-0.22/1.63	2.46/2.61	1.92/1.57	1.07/0.27	-0.6/-1.38	-1.88/-2.21	-2.04/-1.74	-1.38/-1.16	-1.21/-1.37
Θ(157.5°)	-2.57/-2.13	-1.87/-1.84	-2.03/-2.53	-3.38/-4.23	-4.11/-2.98	-2.38/-2.17	-2.23/-2.33	-2.61/-3.03	-3.52/-3.73	-3.84/-3.92	-4.04/-4.42	-5.29/-6.8	-9.61/-11.86	-10.23/-7.66	-4.58/-2.42	-0.95/0.01	0.26/0.01	-0.68/-1.43	-2.47/-3.72	-4.99/-6.06	-6.43/-6.63	-6.36/-5.68	-4.7/-3.79	-3.21/-2.95
Θ(165°)	-4.98/-4.37	-3.6/-3.19	-3.02/-3.18	-3.73/-4.53	-5.14/-5.43	-5.17/-5.11	-5.47/-5.94	-6.22/-6.37	-6.41/-6.17	-5.94/-5.79	-5.93/-6.38	-7.29/-8.34	-9.25/-9.32	-7.99/-6.5	-5.64/-4.69	-4.9/-4.21	-4.64/-5.59	-6.99/-8.45	-10.68/-12.99	-13.33/-12.96	-12.93/-13.11	-12.29/-11.5	-10.46/-9.45	-7.63/-6.28
Θ(172.5°)	-9.44/-8.95	-7.48/-6.35	-5.39/-4.87	-4.73/-4.65	-4.18/-3.78	-3.18/-2.96	-2.82/-3.07	-3.31/-3.95	-4.57/-5.39	-6.1/-6.83	-7.7/-8.55	-9.08/-9.47	-9.03/-8.42	-7.88/-7.6	-7.57/-7.71	-7.86/-7.88	-8.73/-9.38	-10.01/-8.93	-8.59/-7.06	-6.73/-6.56	-6.87/-6.93	-7.04/-7.48	-8.19/-8.99	-9.42/-10.02
Θ(180°)	-13.8/-13.16	-13.02/-10.6	-8.65/-7.12	-6.06/-5.09	-4.45/-3.58	-2.9/-2.38	-2.12/-2.16	-2.34/-2.76	-3.26/-3.84	-4.46/-5.23	-6.22/-6.99	-8.1/-9.07	-10.13/-10.53	-10.43/-10.27	-8.73/-8.98	-6.44/-5.07	-4.26/-3.38	-2.91/-2.8	-2.82/-3.53	-4.21/-4.77	-5.28/-6.25	-7.23/-8.73	-10.83/-12.56	
Freq(Hz)	2.4835GPol.	Theta/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-7.6/-7.17	-6.52/-5.72	-4.86/-4.18	-3.7/-3.41	-3.22/-2.93	-2.57/-2.37	-1.99/-1.78	-1.63/-1.61	-1.66/-1.89	-2.24/-2.71	-3.41/-4.3	-5.52/-6.31	-7.04/-7.14	-6.53/-5.9	-5.37/-4.66	-4.16/-3.8	-3.55/-3.17	-2.75/-2.65	-2.23/-1.89	-1.74/-1.79	-1.99/-2.26	-2.62/-3.15	-3.92/-4.86	-6.1/-6.96
Θ(7.5°)	-6.72/-7.22	-6.49/-5.9	-5.61/-5.11	-4.62/-4.33	-4.24/-3.85	-3.33/-3.05	-2.58/-2.27	-2.01/-1.91	-1.99/-2.18	-2.55/-3.2	-3.93/-5	-6.37/-7.04	-7.09/-6.77	-6.26/-5.49	-4.84/-4.31	-3.9/-3.57	-3.28/-3.04	-2.59/-2.42	-2.21/-1.96	-1.85/-1.91	-2.05/-2.25	-2.5/-2.93	-3.58/-4.38	-5.47/-6.12
Θ(15°)	-6.35/-6.52	-6.58/-6.06	-5.74/-5.49	-5.61/-5.69	-5.69/-5.14	-4.43/-4.05	-3.5/-3.1	-2.75/-2.61	-2.57/-2.71	-3.07/-3.71	-4.61/-5.76	-6.65/-6.93	-7.09/-6.86	-6.07/-5.53	-5.14/-4.88	-4.62/-4.33	-3.99/-3.53	-3.11/-2.9	-2.63/-2.41	-2.33/-2.58	-2.81/-3.19	-3.71/-4.38	-5.77/-5.63	
Θ(22.5°)	-5.66/-5.72	-5.84/-5.85	-5.55/-5.64	-5.58/-5.97	-6.55/-6.12	-6.02/-5.62	-4.94/-4.3	-3.83/-3.56	-3.42/-3.48	-3.83/-4.52	-5.23/-5.97	-6.31/-6.7	-6.51/-5.82	-5.41/-5.17	-5.05/-4.98	-4.93/-4.79	-4.64/-3.98	-3.64/-3.39	-2.91/-2.61	-2.42/-2.38	-2.43/-2.56	-2.83/-3.22	-3.72/-4.38	-5.12/-5.64
Θ(30°)	-5.56/-5.68	-5.81/-5.86	-5.7/-5.5	-5.57/-5.98	-6.63/-6.32	-6.05/-5.84	-5.05/-4.34	-3.77/-3.37	-3.15/-3.18	-3.47/-4.04	-4.76/-5.44	-5.58/-5.53	-5.56/-4.9	-4.46/-4.14	-3.97/-4	-4.14/-4.26	-4.3/-4.05	-3.65/-3.2	-2.71/-2.36	-2.19/-2.12	-2.25/-2.55	-2.97/-3.43	-4.01/-4.67	-5.28/-5.66
Θ(37.5°)	-6.13/-6.26	-6.63/-7.05	-6.9/-6.95	-6.71/-6.72	-6.77/-6.47	-5.98/-5.66	-4.99/-4.3	-3.68/-3.15	-2.82/-2.72	-2.94/-3.34	-3.92/-4.62	-5.4/-5.69	-5.95/-5.34	-4.73/-4.3	-4.16/-4.34	-4.61/-4.76	-4.46/-4.07	-3.59/-2.86	-2.32/-2.02	-1.9/-1.93	-2.17/-2.58	-3.12/-3.7	-4.38/-5.02	-5.62/-5.97
Θ(45°)	-6.56/-6.43	-6.63/-7.07	-7.48/-7.5	-7.13/-6.6	-6.04/-5.62	-5.31/-5.07	-4.9/-4.65	-4.25/-3.75	-3.27/-3.05	-3.11/-3.37	-3.85/-4.62	-5.66/-6.9	-7.29/-7.57	-7.12/-6.61	-6.59/-6.78	-6.68/-6.05	-5.12/-4.56	-4.09/-3.36	-2.9/-2.73	-2.73/-2.87	-3.11/-3.43	-3.88/-4.41	-4.99/-5.66	-6.29/-6.57
Θ(52.5°)	-7.55/-7.08	-6.63/-6.47	-6.24/-5.9	-5.4/-4.94	-4.75/-4.78	-4.82/-4.9	-5.01/-4.65	-4.47/-4.14	-3.47/-3.06	-2.96/-3.08	-3.38/-3.95	-4.86/-6.31	-6.94/-7.23	-7.54/-7.33	-7.52/-7.44	-6.91/-5.88	-5.17/-4.69	-3.96/-3.45	-3.23/-3.15	-3.22/-3.5	-3.97/-4.46	-4.86/-5.25	-5.89/-6.82	-7.63/-7.76
Θ(60°)	-8.86/-7.73	-6.64/-5.8	-5.13/-4.66	-4.22/-3.85	-3.84/-4.25	-4.6/-4.62	-4.55/-4.37	-4.17/-4.19	-3.72/-3.27	-3.08/-3.23	-3.59/-4.03	-4.81/-6.25	-6.8/-7.13	-7.09/-8.06	-8.66/-8.26	-7.43/-6.84	-6/4.96	-4.29/-3.97	-3.76/-3.6	-3.44/-3.45	-3.68/-4.23	-4.98/-5.61	-6.3/-7.4	-8.53/-9.12
Θ(67.5°)	-7.97/-7.31	-6.64/-6.66	-4.68/-3.8	-3.14/-2.66	-2.52/-2.89	-3.38/-3.55	-3.42/-3.29	-3.38/-3.28	-3.13/-3.22	-3.23/-3.29	-3.51/-3.81	-4.82/-6.49	-6.63/-6.75	-7.12/-8.72	-9.99/-9.82	-8.9/-7.94	-6.95/-6.08	-5.64/-5.31	-4.87/-4.47	-4.12/-3.79	-3.67/-4.07	-5/-5.9	-6.58/-7.5	-8.32/-8.56
Θ(75°)	-10.35/-9.16	-7.79/-6.87	-5.26/-3.97	-3.22/-2.56	-2.41/-2.77	-3.36/-3.99	-4.26/-4.26	-4.14/-3.74	-2.91/-2.25	-1.92/-1.7	-1.55/-1.74	-2.73/-4.07	-4.68/-5.32	-6.42/-8.14	-8.42/-8.13	-8.2/-8.41	-8.49/-7.67	-6.96/-6.18	-5.49/-5.1	-4.94/-5.1	-5.47/-6.08	-7.28/-9.01	-10.53/-12.03	-12.94/-11.54
Θ(82.5°)	-12.77/-11.58	-10.38/-9.26	-8.16/-6.14	-4.42/-3.35	-2.97/-2.87	-3/-3.59	-4.41/-5.26	-5.77/-5.42	-4.43/-3.76	-3/-2.53	-2.2/-2.4	-3.54/-4.4												





Radiated Composite Gain Data of 2.4GHz

Appendix A

Θ (15°)	0.96/0.65	0.14/-0.45	-1.17/-2.08	-3.34/-4.9	-6.79/-9.55	-14.04/-18.57	-17.97/-12.45	-7.73/-5.17	-2.84/-1.57	-0.52/0.24	0.86/1.3	1.62/1.78	1.76/1.54	1.13/0.51	-0.31/-1.45	-2.87/-4.71	-7.22/-10.69	-15.69/-17.81	-16.34/-10.37	-6.83/-4.36	-2.54/-1.21	-0.27/0.32	0.72/0.95	1.02/0.95
Θ (22.5°)	0.81/0.41	-0.14/-0.77	-1.51/-2.4	-3.42/-4.84	-6.4/-8.7	-12.09/-17.52	-18.27/-11.45	-8.29/-5.58	-3.51/-1.94	-0.85/0.14	0.93/1.55	1.95/2.15	2.12/1.89	1.48/0.87	0.04/-1.04	-2.46/-4.29	-6.74/-9.98	-14.45/-17.12	-12.83/-8.64	-5.62/-3.46	-1.87/-0.68	0.12/0.6	0.91/1.03	1.01/0.85
Θ (35°)	0.97/0.51	-0.11/-0.71	-1.38/-2.07	-2.86/-3.71	-4.83/-6.43	-8.59/-11.43	-14.86/-13.72	-10.11/-6.9	-4.28/-2.15	-1.01/0.41	1.27/1.87	2.26/2.46	2.45/2.24	1.88/1.3	-0.48/-0.54	-1.94/-3.66	-5.68/-8.63	-11.55/-13.38	-11.5/-8.39	-5.72/-3.67	-0.20/-0.86	0.08/0.72	1.05/1.15	1.11/0.91
Θ (37.5°)	1.57/1.06	0.39/-0.19	-0.74/-1.22	-1.56/-2.14	-2.91/-4.14	-5.86/-8.24	-11.71/-14.39	-11.18/-7.26	-4.26/-2.17	-0.83/0.51	1.29/1.89	2.26/2.45	2.44/2.24	1.87/1.33	0.62/-0.34	-1.62/-3.19	-5.21/-7.63	-10.56/-13.02	-12.19/-9.17	-6.36/-4.07	-2.31/-0.85	0.33/1.16	1.64/1.75	1.72/1.54
Θ (45°)	2.08/1.52	0.89/0.37	-0.09/-0.5	-0.89/-1.29	-2/-3.13	-4.88/-7.47	-11.35/-14.75	-11.37/-1.24	-4.26/-2.24	-0.82/0.2	1.07/1.59	1.94/2.17	2.24/2.14	1.86/1.41	0.73/-0.2	-1.49/-3.14	-5.22/-8.73	-10.99/-14.91	-14.6/-10.48	-6.8/-4.08	-2.02/-0.42	0.85/1.75	2.32/5	2.44/2.16
Θ (52.5°)	2.17/1.68	1.23/0.87	0.51/0.19	-0.08/-0.5	-1.2/-2.46	-4.38/-7.5	-12.44/-17.81	-11.87/-7.35	-4.43/-2.51	-1.15/-0.13	0.72/1.43	1.98/2.37	2.55/2.54	2.32/1.83	1.04/-0.03	-1.46/-3.27	-5.68/-8.79	-13.01/-16.85	-15.55/-8.92	-5.25/-2.68	-0.78/0.55	1.53/2.15	2.55/2.74	2.73/2.47
Θ (60°)	2.54/2.21	1.84/1.55	1.29/1.01	0.72/0.28	-0.54/-2.02	-4.1/-7.23	-12.22/-18.06	-15.75/-9.98	-6.85/-4.75	-2.95/-1.45	-0.23/0.75	1.47/1.98	2.22/1.3	1.77/1.16	0.26/-0.86	-2.38/-4.46	-7.35/-11.05	-15.35/-16.28	-11.9/-7.68	-4.55/-2.26	-0.58/0.65	1.46/1.96	2.24/2.42	2.62/2.61
Θ (67.5°)	3.48/3.34	2.99/2.63	2.28/1.91	1.38/0.67	-0.52/-2.38	-4.99/-8.57	-13.95/-18.65	-17.66/-11.89	-8.79/-6.33	-3.96/-2.01	1.27/1.64	1.61/1.18	0.48/-0.43	1.36/-2.43	-3.92/6	-8.59/-11.19	-12.96/-12.23	-9.5/-7.61	-4.4/-2.51	-1.03/0.21	1.31/2.12	2.59/2.92	3.24/3.5	
Θ (75°)	4.18/4.1	3.83/4.1	2.91/2.33	1.52/0.35	-1.21/-3.41	-6.31/-10.43	-17.65/-17.72	-15.78/-11.88	-10.08/-8.38	-5.94/-3.83	-2.23/-1.03	0.01/-0.33	-0.8/-1.26	-1.75/-2.5	-3.61/-4.96	-6.7/-8.76	-10.72/-11.52	-10.99/-9.31	-7.01/-4.7	-2.69/-0.88	0.78/2.12	3.07/3.64	3.98/4.21	
Θ (82.5°)	3.98/3.77	3.53/26	3.01/2.69	2.06/1.01	-0.44/-2.35	-4.9/-8.53	-14.49/-17.53	-16.49/-13.7	-13.39/-11.45	-7.79/-5.06	-3.4/-2.27	-1.8/-1.84	-2.09/-2.28	-2.38/-2.45	-2.64/-3.03	-3.45/-4.36	-6.07/-8.12	-10.45/-13.32	-15.2/-13.15	-9.27/-5.62	-2.77/-0.61	0.96/2.13	3.06/3.67	4/4.1
Θ (90°)	2.83/2.48	2.23/2.2	2.4/2.56	2.41/1.74	0.63/-0.97	-3.06/-5.86	-9.74/-14.45	-17.35/-18.56	-19.03/-12.89	-7.55/-4.83	-3.62/-3.47	-4.13/-5.14	-5.9/-6.22	-6.06/-5.44	-4.46/-3.42	-2.75/-3.07	-4.23/6	-8.63/-12.51	-14.69/-12.21	-8.71/-5.51	-3.03/-1.13	0.41/4.5	2.19/2.69	2.94/2.99
Θ (97.5°)	1.83/1.66	1.57/1.56	1.71/1.85	1.65/1.02	-0.06/-1.47	-3.25/-5.67	-8.81/-12.41	-16.31/-17.94	-16.89/-9.07	-5.11/-3.37	-2.85/-3.29	-4.35/-5.64	-6.68/-7.61	-8.01/-7.29	-5.84/-4.54	-3.98/-4.42	-5.76/-7.62	-10.42/-14.72	-14.32/-10.81	-8.13/-5.85	-4.04/-2.39	-0.76/0.52	1.31/1.76	1.95/1.9
Θ (105°)	1.46/1.51	1.65/1.78	1.77/1.62	1.24/0.37	-0.89/-2.22	-3.44/-4.58	-5.89/-7.39	-9.25/-12.29	-18.84/-18.34	-10.28/-7.41	-6.22/-5.75	-6.13/-6.72	-6.91/-7.18	-7.42/-7.19	-6.71/-6.11	-5.8/-6.16	-7.14/-8.09	-10.09/-12.82	-11.79/-9.09	-6.99/-5.2	-3.82/-2.68	-1.53/-0.44	0.45/1.07	1.43/1.57
Θ (112.5°)	1.29/1.55	1.83/1.97	1.95/1.64	1.01/-0.15	-1.73/-3.33	-4.4/-5.09	-5.75/-6.5	-9.47/-8.89	-10.84/-11.92	-11.02/-9.23	-7.62/-7.03	-7.3/-7.12	-6.75/-6.8	-7.24/-8.14	-8.9/-8.75	-8.24/-8.21	-8.33/-8.54	-10.01/-12.27	-11.44/-8.53	-6.07/-4.24	-3.03/-2.13	-1.49/-1.21	-0.9/-2.03	0.57/1.21
Θ (120°)	1.39/1.59	1.5/1.34	1.06/36	-0.53/-2.02	-4.31/-7.04	-9.2/-9.55	-9.86/-9.47	-9.13/-9.27	-9.95/-10.43	-10.17/-9.14	-8.25/-8.58	-9.75/-9.8	-8.81/-8.88	-10.06/-11.04	-9.93/-9.66	-8.41/-8.68	-8.78/-8.98	-10.55/-13.27	-13.55/-10.83	-8.09/-6.2	-5.06/-4.12	-3.23/-2.82	-2.64/-2.03	-0.68/0.7
Θ (127.5°)	1.78/1.8	1.26/0.55	-0.09/-0.94	-2.09/-3.71	-5.96/-8.89	-11.69/-12.86	-12.04/-10.65	-9.48/-8.88	-8.97/-9.48	-10.22/-11.14	-12.13/-14.28	-18.35/-17.61	-14.96/-15.22	-15.45/-11.28	-8.04/-7.05	-7.5/-8.29	-9.06/-10.25	-12.77/-16.51	-18.52/-15.95	-12.33/-9.82	-8.18/-6.51	-4.34/-2.46	-1.27/-0.53	0.35/1.42
Θ (135°)	0.66/0.67	0.02/-1.11	-2.49/-3.98	-5.67/-7.66	-9.98/-12.46	-13.82/-14.5	-14.61/-15.17	-13.24/-12.2	-11.58/-11.9	-14.16/-18.08	-18.09/-17.26	-7.42/-14.31	-14.3/-12.99	-10.48/-8.1	-6.92/-7.15	-8.43/-10.06	-12.12/-16.34	-17.45/-17.97	-17.76/-16.8	-16.21/-12.81	-10.4/-8.5	-5.24/-2.8	-1.19/-4.01	0.1/0.68
Θ (142.5°)	-1.23/-1.2	-1.68/-2.73	4.41/-6.41	-8.74/-11.29	-13.28/-14.17	-13.99/-13.88	-14.34/-14.55	-16.99/-17.54	-17.1/-17.33	-18.6/-18.98	-18.64/-14.79	-12.85/-12.09	-11.63/-10.65	-9.27/-8.22	-8.05/-8.82	-10.27/-12.15	-14.85/-18.23	-17.28/-18.98	-18.43/-18.62	-18.87/-19.35	-15.86/-12.12	-8.45/-5.67	-3.38/-2.03	-1.39/-1.02
Θ (150°)	-3.29/-3.46	-3.95/-4.84	-6.16/-7.87	-8.49/-11.9	-13.49/-14.5	-15.11/-15.59	-16.25/-17.53	-18.73/-18.67	-18.09/-18.48	-19.39/-16.82	-15.16/-14.63	-15.27/-16.56	-17.35/-17.06	-16.11/-15.46	-15.67/-16.34	-17.45/-19.43	-17.9/-18.51	-17.9/-16.76	-15.79/-16.79	-17.85/-18.52	-18.53/-17.71	-13.02/-9.26	-6.17/-4.14	-3.03/-2.56
Θ (157.5°)	-5.07/-5.32	-5.77/-6.43	-7.32/-8.48	-9.77/-11.36	-13.01/-14.7	-16.23/-17.5	-18.56/-18.37	-18.57/-18.89	-18.22/-15.55	-13.37/-11.83	-10.78/-10.39	-10.69/-11.45	-12.45/-13.63	-14.83/-15.91	-16.72/-17.62	-18.9/-18.06	-18.88/-19.2	-16.63/-15.65	-14.71/-15.08	-16.45/-18.66	-18.36/-17.67	-14.79/-11.72	-8.81/-6.52	-4.93/-4.1
Θ (165°)	-6.89/-7.08	-7.52/-8	-8.68/-9.79	-11.23/-13.08	-15.21/-17.89	-17.91/-17.95	-18.66/-19.16	-18.83/-18.48	-17.23/-14.67	-12.69/-11.22	-10.13/-9.45	-9.25/-9.47	-9.97/-10.75	-11.77/-13.01	-14.49/-16.26	-19.19/-18	-18.84/-17.92	-17.09/-17.41	-18.42/-18.08	-18.74/-18.19	-15.63/-13.18	-10.93/-8.92	-7.28/-6.29	-2.78/-2.62
Θ (172.5°)	-10.4/-10.9	-11.76/-12.56	-13.47/-14.79	-16.74/-18.85	-18.53/-19.19	-17.8/-19	-18.48/-18.85	-17.55/-19.18	-19.18/-33	-16.29/-14.54	-13.12/-12.05	-11.57/-11.74	-11.47/-11.95	-12.64/-13.9	-16.88/-17.92	-19.11/-17.47	-19.18/-92	-18.98/-18.1	-18.84/-17.81	-19.34/-18	-18.45/-17.68	-16.46/-15.21	-13.98/-12.61	-11.16/-10.35
Θ (180°)	-18.42/-17.68	-18.49/-17.58	-18.81/-18.8	-18.49/-17.84	-19.3/-18.45	-18.32/-18.28	-18.35/-18.65	-18.33/-19.12	-19.18/-18.6	-17.63/-17.58	-18.43/-17.34	-18.43/-18.21	-18.68/-17.86	-17.32/-18.38	-18.55/-18.08	-17.62/-19.26	-19.01/-17.85	-18.94/-17.49	-18.19/-19.4	-17.6/-18.77	-18.53/-18.87	-18.52/-19.26	-17.64/-17.84	-18.53/-18.49
Freq(Hz)	2.4835GPol	ThetaAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-18.59/-15.42	-11.55/-0.97	7.28/6	-5.01/-4.2	-3.6/-3.11	-2.7/-2.39	-2.4/-2.7	-3.08/-3.53	-4.12/-5.02	-6.14/-7.56	-9.46/-12.18	-16.52/-18.21	-18.46/-16.38	-12.1/-9.53	-7.64/-6.18	-5.08/-4.31	-3.68/-3.24	-2.93/-2.82	-2.82/-2.9	-3.13/-3.57	-4.27/-5.23	-6.4/-7.94	-10.05/-12.82	-17.08/-18.39
Θ (7.5°)	-18.54/-16.42	-12.47/-9.93	-8.15/-6.86	-5.82/-4.89	-4.25/-3.71	-3.27/3.01	-3.18/-3.48	-3.74/-4.15	-4.83/-5.71	-6.74/-8.05	-9.88/-12.65	-16.99/-18.48	-17.18/-15.05	-11.48/-9.08	-7.56/-6.1	-4.96/-4.09	-3.47/-3.03	-2.75/-2.61	-2.61/-2.75	-3.03/-3.52	-6.44/-8.06	-10.27/-13.15	-17.27/-16.49	-
Θ (15°)	-19.1/-15.5	-12.25/-10.07	-8.39/-7.05	-6.08/-5.24	-4.57/-3.96	-3.51/-3.28	-3.44/-3.7	-3.98/-4.5	-5.22/-6.11	-7.22/-8.71	-10.8/-13.76	-18.56/-18.7	-18.59/-14.25	-10.97/-8.79	-7.17/-5.93	-4.95/-4.23	-3.62/-3.21	-2.99/-2.8	-2.78/-2.91	-3.23/-3.72	-4.47/-5.43	-6.76/-8.49	-10.71/-13.51	-17.58/-17.34
Θ (22.5°)	-16.35/-13.59	-11.31/-9.6	-8.22/-7.09	-6.08/-5.45	-4.84/-4.3	-3.91/-3.74	-3.91/-4.09	-4.43/-4.98	-5.73/-6.59	-7.86/-9.61	-12.16/-16.03	-17.81/-18.44	-17.53/-12.98	-10.24/-8.3	-6.84/-5.72	-4.86/-4.2	-3.66/-3.23	-2.94/-2.77	-2.79/-2.99	-3.32/-3.9	-4.68/-5.78	-7.28/-8.18	-11.45/-14.27	-17.65/-19.1
Θ (30°)	-14.64/-12.56	-10.69/-9.26	-8.08/-7.16	-6.47/-5.84	-5.36/-4.9	-4.55/-4.35	-4.39/-4.46	-4.69/-5.08	-5.66/-6.53	-7.79/-9.48	-11.91/-15.35	-17.49/-18.3	-18.19/-13.31	-10.39/-8.3	-6.82/-5.73	-4.92/-4.27	-3.72/-3.3	-3.09/-3	-3.1/-3.3	-3.74/-4.31	-5.12/-6.2	-7.71/-9.52	-11.89/-14.5	-16.66/-16.94
Θ (37.5°)	-13.54/-12.75	-11.14/-9.82	-8.81/-7.99	-7.37/-6.86	-6.39/-5.91	-5.54/-5.36	-5.32/-5.2	-5.25/-5.43	-5.96/-6.85	-8.15/-9.63	-11.29/-13.44	-16.84/-18.05	-18.88/-14.17	-11.04/-8.84	-7.23/-6.13	-5.23/-4.56	-4.02/-3.64	-3.38/-3.3	-3.33/-3.54	-3.92/-4.54	-5.34/-6.35	-7.68/-9.33	-11.47/-13.67	-15.43/-15.87
Θ (45°)	-16.65/-15.17	-13.6/-12.11	-10.86/-9.86	-9.04/-8.35	-7.68/-7	-6.5/-6.3	-6.21/-6.07	-6.09/-6.35	-6.92/-7.81	-8.97/-9.8	-10.48/-11.79	-14.29/-18.96	-18.42/-17.77	-14.58/-11.46	-9.27/-7.73	-6.54/-5.76	-5.16/-4.73	-4.44/-4.34	-4.34/-4.42	-4.66/-5.12	-5.73/-6.58	-7.67/-9.14	-10.92/-12.92	-15.2/-16.85
Θ (52.5°)	-18.89/-18.95	-16.5/-14.1	-11.97/-10.74	-9.93/-9.32	-8.68/-8.01	-7.45/-7.38	-7.53/-7.59	-7.79/-8.17	-8.77/-9.55	-10.26/-10.19	-10.29/-14.77	-14.28/-19.4	-18.22/-17.16	-17.37/-13.38	-11.7/-8.9	-7.64/-6.82	-6.25/-5.93	-5.8/-5.79	-5.79/-5.82	-5.89/-6.11	-6.53/-7.3	-8.38/-9.67	-11.28/-13.97	-16.11/-18.48
Θ (60°)	-19.43/-17.49	-18.68/-12.31	-12.0/-9.2	-9.83/-8.84	-8.66/-8.46	-8.05/-8.07	-8.46/-8.96	-9.59/-10.09	-10.47/-10.84	-12.73/-10.02	-9.83/-11.11	-14.03/-18.34	-17.14/-18.95	-17.75/-17.91	-14.23/-11.81	-10.33/-9.5	-9.12/-9.03	-8.94/-8.98	-8.76/-8.61	-8.38/-8.21	-8.37/-8.96	-9.87/-10.9	-12.03/-13.46	-15.61/-18.38
Θ (67.5°)	-17.55/-16.78	-13.95/-11.33	-9.12/-9.74	-7																				



Radiated Composite Gain Data of 2.4GHz

Appendix A

Θ(67.5°)	-6.82/-5.03	-4.3/-4.47	-5.6/-7.81	-10.61/-12.39	-11.65/-9.26	-7.1/-5.54	-4.45/-3.78	-3.51/-3.61	-3.92/-4.57	-5.72/-7.33	-9.64/-13.14	-16.91/-17.17	-14.21/-10.45	-7.87/-7.08	-8.38/-11.77	-16.15/-11.57	-6.84/-4.59	-3.78/-3.58	-3.93/-4.64	-5.36/-5.91	-6.44/-7.03	-7.53/-8.16	-9.18/-10.66	-11.52/-9.52
Θ(75°)	-10.45/-7.51	-6.17/-6.03	-6.75/-7.96	-8.58/-7.51	-5.67/-4.03	-3.03/-2.48	-2.22/-3.25	-2.93/-4.12	-6.54/-9.75	-12.84/-13.29	-12.76/-13.51	-16.04/-17.45	-18.99/-12.66	-8.54/-6.97	-7.24/-8.16	-8.04/-6.19	-3.95/-3.27	-1.42/-1.06	-1.3/-2.08	-3.12/-4.44	-5.99/-7.73	-9.69/-11.66	-13.66/-15.49	-16.09/-13.97
Θ(82.5°)	-12.01/-9.83	-8.55/-8.01	-8.08/-8.26	-17.12/-19.1	-7.32/-5.03	-2.32/-1.45	-0.93/-0.9	-1.02/-1.24	-1.54/-2.21	-10.96/-16.89	-17.82/-15.83	-14.01/-12.76	-11.46/-10.04	-9.18/-9.21	-9.67/-9.26	-7.33/-5.11	-3.3/-2	-1.19/-0.81	-0.93/-1.48	-2.38/-3.53	-4.78/-6.06	-7.37/-8.95	-11.76/-18.19	-18.96/-15.01
Θ(90°)	-11.49/-10.46	-11.32/-12.5	-13.8/-14.73	-12.28/-7.77	-4.32/-2.37	-1.59/-1.37	-1.38/-1.53	-1.74/-2.32	-3.91/-6.9	-11.43/-16.65	-18.1/-18.75	-18.23/-13.58	-10.87/-9.82	-9.47/-8.92	-8.35/-7.77	-6.25/-4.01	-1.93/-0.43	0.39/0.55	0.23/-0.17	-0.39/-0.58	-1.07/-1.99	-3.27/-4.88	-7.13/-11.08	-18.32/-15.9
Θ(97.5°)	-9.51/-8.59	-10.83/-15.24	-18.82/-17.75	-18/-10.29	-5.72/-3.42	-2.46/-1.93	-1.55/-1.58	-2.2/-3.66	-6.64/-12.15	-19.26/-13.37	-18.85/-18.42	-15.37/-12.3	-10.86/-10.4	-8.25/-6.7	-6.55/-7.37	-6.87/-4.64	-2.37/-0.81	-0.25/-0.52	-1.18/-1.67	-1.69/-1.48	-1.67/-2.61	-4.35/-6.89	-10.32/-14.4	-18.1/-15.23
Θ(105°)	-9.42/-8.2	-10.33/-15.25	-17.12/-19.1	-17.45/-12.69	-6.14/-3.21	-2.43/-2.71	-3.44/-4.69	-7.19/-12.55	-17.96/-14.04	-16.16/-9.38	-9.92/-12.14	-16.59/-18.21	-14.68/-10.28	-6.57/-4.86	-6.54/-7.33	-9.94/-9.71	-7.6/-5.78	-4.92/-4.83	-4.79/-4.22	-3.4/-2.82	-3.23/-3.02	-6.86/-5.86	-10.04/-17.26	-19.06/-16.5
Θ(112.5°)	-12.11/-10.24	-12.46/-17.76	-16.08/-11.27	-12.56/-18.68	-10.18/-4.73	-2.91/-2.85	-3.78/-5.38	-7.48/-8.4	-7.43/-6.57	-6.64/-7.25	-8.8/-12.8	-18.73/-13.82	-9.57/-6.2	-4.21/-4.12	-5.94/-10.56	-18.32/-12.15	-7.8/-6.94	-7.27/-8.72	-12.71/-18.8	-17.85/-12.95	-10.52/-8.76	-7.72/-8.29	-11.74/-18.82	-18.53/-16.09
Θ(120°)	-5.89/-5.6	-6.65/-8.88	-9.33/-7.19	-6.41/-8.4	-14.11/-16.05	-11.64/-10.11	-9.82/-8.83	-7.22/-6.07	-6.08/-7.15	-8.3/-8.88	-11.14/-18.32	-13.7/-7.92	-5.13/-3.47	-3.4/-25	-7.61/-16.07	-12.86/-5.13	-2.34/-1.57	-1.69/-2.4	-3.92/-5.39	-7.09/-6.86	-7.26/-8.7	-9.94/-10.49	-12.56/-13.12	-9.14/-6.75
Θ(127.5°)	-0.78/-0.65	-1.42/-3.35	-7.33/-11.6	-9.76/-8.26	-9.1/-10.92	-11.03/-9.48	-8.25/-7.46	-6.98/-7.51	-9.67/-12.01	-10.59/-9.11	-9.71/-9.27	-7.94/-5.83	-5.14/-5.36	-6.61/-9.77	-16.64/-12.11	-5/-1.59	-0.130/0.9	-0.33/-1.22	-2.85/-5.95	-8.34/-9.89	-10.89/-13.03	-15.26/-15.39	-13.44/-8.69	-4.71/-2.57
Θ(135°)	-0.96/-0.91	-1.64/-3.47	-7.85/-19.84	-11.18/-6.25	-5.15/-5.83	-7.18/-8.43	-9.62/-11.28	-13.61/-15.18	-12.28/-8.36	-6.04/-5.33	-5.37/-4.85	-3.7/-3.18	-3.98/-6.24	-10.49/-16.64	-12.51/-6.19	-2.16/-0.07	0.48/0.4	-0.16/-0.94	-2.14/-4.12	-7.03/-10.46	-13.56/-16.42	-18.59/-17.79	-15.65/-9.11	-5.18/-3.02
Θ(142.5°)	-3.56/-3.53	-4.39/-6.42	-11.47/-18.98	-10.09/-5.02	-3.21/-2.96	-3.61/-4.77	-6.22/-7.47	-7.76/-6.96	-5.66/-4.54	-3.9/-3.96	-4.23/-4.08	-3.77/-4.53	-6.26/-10.17	-18.9/-19.22	-9.71/-4.99	-0.03/-0.33	0.38/0.37	-0.01/-0.5	-1.35/-2.64	-4.21/-5.84	-7.14/-8.21	-9.35/-10.67	-11.21/-9.55	-7.11/-5.4
Θ(150°)	-3.6/-3.73	-4.43/-5.83	-8.48/-13.78	-17.18/-11.61	-7.45/-5.52	-4.64/-5.4	-4.63/-4.7	-4.86/-5.24	-5.68/-6.23	-6.74/-7	-7.39/-8.67	-11.78/-9.27	-7.55/-5.17	-3.29/-1.7	0.151/96	2.32/2.16	1.65/-0.99	-1.15/-2.44	-3.79/-4.92	-5.72/-6.32	-6.88/-7.36	-7.48/-7.02	-6.15/-5.23	
Θ(157.5°)	-4.16/-3.79	-3.83/-4.29	-5.32/-7.21	-10.67/-18.32	-17.93/-12.78	-9.21/-7.31	-6.4/-6.06	-6.13/-6.52	-7.22/-8.14	-8.86/-9.32	-9.77/-10.44	-11.95/-14.61	-18.73/-18.53	-11.05/-6.46	-3.37/-1.32	-0.03/0.53	0.48/-0.07	-1.07/-2.45	-4.25/-6.32	-8.3/-9.8	-10.76/-11.33	-11.51/-11.13	-10.2/-8.95	-7.56/-6.42
Θ(165°)	-7.51/-6.51	-5.89/-5.68	-5.92/-5.69	-7.8/-9.55	-10.85/-10.86	-10.18/-9.41	-9.23/-6.93	-10.01/-10.58	-11.3/-11.97	-12.88/-14.42	-16.97/-19.93	-17.68/-12.98	-9.43/-6.83	-4.91/-3.63	-3.03/-3.1	-3.72/-4.84	-6.78/-9.85	-14.72/-17.91	-18.93/-18.89	-18.09/-17.29	-18.43/-19.03	-18.27/-18.16	-13.84/-11.09	
Θ(172.5°)	-15.07/-12.41	-10.54/-9.43	-8.77/-8.36	-7.38/-8.49	-8.13/-7.45	-6.97/-6.58	-6.21/-6.12	-6.44/-6.93	-7.46/-8.32	-9.55/-11.97	-12.57/-13.97	-14.48/-12.89	-11.45/-10.2	-9.23/-8.78	-5.15/-10.39	-12.52/-16.24	-18.99/-19.27	-13.78/-11.02	-9.91/-9.53	-10.68/-12.29	-14.95/-19.13	-17.79/-18.04		
Θ(180°)	-17.51/-18.39	-18.36/-16.54	-14.01/-12.16	-10.94/-9.71	-8.32/-7.14	-6.4/-5.91	-5.46/-5.24	-5.4/-5.72	-6.15/-6.8	-7.73/-8.79	-9.85/-10.8	-11.69/-12.54	-13.27/-13.84	-14.32/-14.43	-14.18/-14.06	-13.79/-12.89	-11.19/-9.6	-8.26/-6.94	-6.06/-5.75	-6.08/-6.82	-7.62/-8.48	-9.49/-10.94	-12.92/-15.83	-18.67/-17.57
Freq(Hz)	2.450GPol	Theta/Ant. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-17.87/-18.95	-18.86/-18.37	-16.26/-14.52	-12.86/-11.52	-10.57/-9.85	-9.29/-8.86	-8.72/-8.65	-8.53/-8.55	-8.72/-9.07	-9.61/-10.5	-11.74/-13.19	-14.83/-16.84	-19.16/-18.94	-17.62/-17.65	-18.2/-17.35	-15.06/-13.44	-12.08/-11.03	-10.1/-9.23	-8.68/-8.49	-8.6/-8.93	-9.28/-9.79	-10.53/-11.35	-12.14/-13.14	-14.76/-17.35
Θ(7.5°)	-16.41/-18.67	-17.91/-18.97	-18.67/-19.22	-16.41/-14.27	-13/-12.18	-11.54/-11.07	-10.82/-10.6	-10.52/-10.47	-10.64/-11.07	-11.82/-13.01	-14.57/-16.42	-18.57/-18.13	-17.95/-18.43	-19.25/-18.77	-17.37/-15.37	-13.63/-12.14	-10.94/-9.93	-9.11/-8.43	-8.01/-7.85	-7.9/-8.07	-8.33/-8.68	-9.14/-9.7	-10.3/-11.1	-12.33/-14.3
Θ(15°)	-13.55/-15.69	-11.41/-17.62	-8.48/-19.26	-16.68/-19.2	-17.4/-18	-17.12/-16.14	-15.42/-14.76	-14.26/-13.87	-13.86/-14.2	-14.87/-15.98	-18.57/-16.57	-18.54/-19.19	-16.41/-15.58	-14.81/-13.86	-12.85/-11.94	-11.08/-10.26	-9.59/-9	-8.55/-8.21	-8.03/-7.98	-7.97/-9.6	-8.34/-8.41	-8.83/-9.53	-10.56/-12.02	
Θ(22.5°)	-12.03/-13.66	-15.47/-17.31	-19.22/-18.14	-18.45/-18.47	-18.98/-18.76	-17.67/-19.15	-17.51/-19.04	-18.2/-17.51	-18.61/-19.18	-18.37/-17.49	-18.34/-17.91	-16.59/-14.87	-13.7/-12.95	-12.57/-12.44	-12.2/-11.86	-11.38/-11.03	-10.69/-10.26	-9.81/-9.44	-9.17/-8.9	-8.61/-8.39	-8.24/-8.18	-8.16/-8.22	-8.42/-8.9	-9.74/-10.87
Θ(30°)	-11.26/-12.55	-14.36/-16.31	-19.14/-18.55	-18.77/-18.49	-19.29/-18.87	-18.45/-17.66	-16.71/-15.95	-15.66/-15.58	-15.71/-16.34	-17.55/-18.31	-17.26/-14.88	-12.65/-11.03	-10.03/-9.4	-9.16/-9.18	-9.4/-9.54	-9.69/-9.69	-8.62/-9.3	-8.89/-8.7	-8.7/-8.66	-8.61/-8.56	-8.63/-8.73	-8.78/-8.76	-8.76/-8.91	-9.43/-10.28
Θ(37.5°)	-9.7/-10.46	-11.89/-13.91	-16.68/-19.02	-19.11/-18.91	-17.25/-15.77	-14.75/-13.65	-12.57/-11.57	-11.01/-10.63	-10.28/-10.33	-10.86/-11.61	-11.89/-11.23	-9.93/-8.84	-8.11/-7.73	-7.65/-8.04	-5.10/-4.98	-10.14/-10.34	-9.48/-9.58	-9.48/-9.58	-9.72/-9.81	-8.99/-9.77	-9.51/-9.18	-8.9/-9.78	-8.85/-9.3	
Θ(45°)	-9.73/-9.73	-10.36/-11.63	-13.24/-14.58	-15.12/-14.71	-13.96/-12.9	-12.02/-11.27	-10.25/-9.32	-8.68/-8.29	-7.91/-7.74	-7.96/-8.55	-9.11/-9.25	-8.92/-8.58	-8.34/-8.16	-8.31/-9.07	-10.42/-11.57	-11.75/-11.13	-10.59/-10.18	-9.91/-9.94	-10.24/-10.5	-10.72/-11.17	-11.72/-11.91	-11.53/-11	-10.63/-10.52	-10.36/-9.98
Θ(52.5°)	-14.04/-10.63	-12.59/-12.72	-13.17/-13.24	-12.61/-11.57	-10.91/-10.58	-10.43/-9.95	-9.02/-8.07	-7.43/-7.12	-6.95/-6.96	-7.27/-7.97	-8.77/-9.03	-9/-9.17	-9.14/-8.82	-9.92/-9.86	-11.16/-11.34	-10.57/-9.98	-9.7/-9.25	-8.76/-8.64	-8.58/-8.5	-8.69/-9.29	-10.18/-11.45	-12.71/-13.51	-14.06/-14.67	-15.28/-15
Θ(60°)	-12.06/-11.92	-11.45/-10.82	-10.26/-9.85	-9.15/-8.21	-7.56/-7.54	-7.95/-8.03	-7.25/-6.35	-5.63/-5.27	-5.15/-5.27	-5.61/-6.21	-6.68/-6.8	-6.95/-7.32	-7.3/-6.96	-7.14/-8.34	-8.67/-9.93	-9.87/-10.99	-9.96/-9.18	-8.42/-7.78	-7.07/-6.57	-6.28/-6.17	-6.37/-7.06	-8.29/-8.32	-9.89/-10.27	-10.92/-11.66
Θ(67.5°)	-9.44/-9.16	-8.94/-8.33	-7.49/-6.69	-5.95/-5.41	-5.14/-5.31	-5.84/-6.22	-5.72/-4.83	-4/-3.42	-2.98/-2.8	-2.9/-3.22	-3.45/-3.7	-4.36/-5.2	-5.49/-5.51	-6.34/-8.03	-8.67/-9.21	-10.05/-10.56	-9.79/-8.84	-8.7/-7.13	-6.55/-6.26	-6.15/-6.27	-6.85/-7.82	-9.08/-10.35	-10.96/-10.82	-10.66/-10.05
Θ(75°)	-13.87/-12.11	-11.51/-10.83	-9.15/-7.31	-6.02/-4.48	-5.36/-5.34	-5.52/-5.91	-5.86/-5.28	-4.55/-3.77	-2.89/-2.2	-1.86/-1.86	-2.03/-2.47	-3.49/-4.54	-4.93/-5.26	-6.42/-7.28	-7.34/-8.36	-10.38/-10.17	-10.26/-9.82	-8.91/-8.2	-8.22/-8.82	-10.04/-12.31	-15.32/-17.77	-18.38/-17.71	-19.01/-18.13	-18.93/-18.12
Θ(82.5°)	-18.92/-16.98	-14.05/-13.61	-12.63/-9.38	-6.96/-6.29	-6.54/-6.24	-5.58/-5.31	-5.47/-5.54	-5.49/-5.09	-4.12/-3.09	-2.37/-2.15	-2.34/-3.04	-3.87/-4.15	-4.07/-4.61	-5.3/-5.29	-6.33/-9.14	-10.89/-9.51	-8.59/-7.01	-5.57/-5.14	-5.41/-6.06	-6.58/-6.82	-7.29/-8.32	-9.52/-10.67	-12.76/-14.71	-14.78/-17.5
Θ(90°)	-13.41/-18.42	-15.8/-13.01	-13.1/-10.82	-7.52/-6.51	-7.49/-8.19	-7.05/-5.76	-5.24/-5.03	-5.17/-5.44	-5.15/-4.28	-3.41/-3.09	-3.45/-4.02	-3.85/-3.32	-3.28/-3.61	-3.3/-3.18	-4.55/-6.26	-5.91/-5.33	-4.93/-3.53	-2.75/-2.96	-3.51/-3.95	-3.89/-3.8	-4.43/-5.8	-7.38/-8.52	-10.28/-12.74	-11.97/-10.8
Θ(97.5°)	-8.31/-11.07	-13.26/-11.47	-11.72/-10.01	-6.56/-4.9	-5.23/-6.58	-7.05/-6.41	-5.73/-5.19	-5.01/-5.09	-4.93/-4.46	-4.31/-4.96	-5.85/-5.22	-3.98/-4.39	-3.66/-3.31	-2.4/-2.68	-3.94/-4.24	-3.77/-3.65	-2.85/-1.82	-1.73/-2.12	-2.55/-2.88	-2.98/-3.29	-4.27/-6.11	-8.14/-6.67	-9.11/-7.07	-9.97/-7.4
Θ(105°)	-8.99/-10.26	-12.89/-14.17	-15.61/-13.11	-8.37/-5.87	-5.39/-6.14	-6.82/-6.14	-6.18/-5.4	-4.47/-3.47	-2.39/-1.63	-1.58/-2.27	-2.62/-2	-1.75/-2.52	-3.2/-2.4	-1.61/-1.96	-2.32/-2.14	-2.08/-2.12	-1.85/-1.82	-2.41/-3.1	-4.06/-5.38	-6.67/-7.7	-9.28/-12.43	-19.1/-7.83	-15.48/-14.78	-13.98/-9.4
Θ(112.5°)	-10.36/-9.25	-9.63/-10.85	-14.05/-18.67	-12.49/-8.05	-6.4/-6.21	-6.41/-6.82	-7.36/-7.25	-5.99/-4.25	-5.95/-1.53	-1.41/-1.88	-1.75/-1.18	-1.41/-2.18	-2.13/-0.89	-0.54/-1.06	-1.69/-2.41	-3.34/-14	-4.92/-5.84	-6.38/-6.46	-7.63/-9.72	-11.79/-12.56	-11.55/-10.14	-10.67/-15.27	-11.78/-18.78	-17.56/-12.1
Θ(120°)	-15.21/-12.23	-11.61/-13	-1																					



Radiated Composite Gain Data of 2.4GHz

Appendix A

Θ (112.5°)	-13.31/-12.39	-7.32/-4.23	-1.680/-1.01	0.78/-1.22	1.58/-1.66	1.27/-0.56	-0.09/-0.59	-1.24/-2.29	-3.97/-5.83	-6.73/-6.15	-5.95/-8	-10.87/-10.18	-10.89/-13.39	-12.54/-9.57	-6.79/-3.8	-0.99/-0.87	1.99/-2.38	2.17/-1.37	0.08/-1.15	-1.74/-1.83	-2.1/-2.84	-3.97/-5.04	-5.64/-5.88	-6.52/-8.59
Θ (120°)	-10.52/-18.79	-15.84/-10.56	-7.16/-4.25	-2.55/-1.49	-0.41/-0.78	1.67/-2.2	2.35/-1.89	0.6/-1.76	-5.32/-9.13	-10.84/-10.47	-10.87/-13.61	-12.69/-11.1	-15.39/-18.25	-11.48/-9.3	-7.71/-4.22	-1.17/-0.69	1.92/-55	2.64/-3.1	1.82/-1.2	0.61/-0.06	-0.62/-1.75	-3.53/-5.75	-7.91/-8.08	-7.01/-13.7
Θ (127.5°)	-13.65/-13.97	-8.35/-12.67	-4.73/-4.18	-3.7/-3.28	-2.43/-0.84	0.71/-1.62	1.67/-0.52	-1.96/-5.12	-9.31/-11.58	-11.33/-10.92	-11.68/-11.21	-9.09/-9.89	-15.94/-13.22	-8.67/-8.69	-10.19/-7.54	-3.42/-1.2	-0.420/-58	0.90/-74	0.23/-0.75	-1.97/-3.21	-4.12/-4.83	-5.4/-6.54	-9.49/-15.72	-14.59/-13.14
Θ (135°)	-18.54/-14.28	-7.93/-4.41	-2.59/-1.77	-1.57/-1.95	-2.78/-3.36	-3.26/-3.03	-3.61/-5.34	-7.81/-8.97	-9.34/-11.69	-18.45/-17.4	-18.11/-14.24	-10.27/-9.71	-12/-10.27	-9.81/-10.08	-13.74/-17.72	-14.14/-23	-4.68/-2.68	-1.57/-1.06	-1/-1.18	-1.4/-1.62	-1.6/-1.49	-1.5/-2.05	-3.68/-6.89	-12.71/-1.88
Θ (142.5°)	-17.35/-13.13	-8.25/-4.1	-2.64/-1.2	-0.51/-0.37	-0.81/-1.64	-2.58/-3.24	-3.34/-1.29	-2.33/-2.21	-2.97/-4.88	-7.79/-11.09	-14.64/-13.7	-15.28/-13.42	-12.97/-12.4	-11.5/-10.8	-8.83/-8.11	-5.91/-3.89	-2.3/-1.32	-0.89/-0.85	-0.95/-1.02	-1/-0.94	-0.87/-0.86	-0.99/-1.5	-2.7/-9.7	-9.27/-17.65
Θ (150°)	-17.66/-11.95	-7.8/-5.29	-3.43/-2.02	-1.11/-0.56	-0.39/-0.46	-0.81/-1.08	-1.28/-1.34	-1.47/-1.93	-2.92/-4.31	-5.92/-4.7	-8.94/-10.71	-12.56/-14.27	-15.94/-16.2	-11.34/-10.8	-6.14/-4.34	-3.07/-2.43	-3.48/-2.86	-3.4/-3.79	-3.87/-3.71	-3.48/-3.43	-3.55/-3.94	-4.9/-6.82	-10.83/-18.16	
Θ (157.5°)	-19.23/-12.66	-9.06/-6.9	-5.4/-4.21	-3.35/-2.73	-2.41/-2.37	-2.67/-3.23	-3.98/-4.73	-5.49/-6.32	-7.25/-8.05	-8.61/-9.07	-9.74/-10.85	-12.64/-15.34	-18.88/-18.89	-18.97/-19.05	-15.12/-12.56	-10.66/-9.2	-8.14/-7.83	-8.38/-9.57	-10.97/-11.94	-11.63/-10.6	-9.77/-9.5	-9.51/-9.8	-10.57/-12.28	-16.14/-17.44
Θ (165°)	-18.57/-15.45	-12.18/-10.02	-8.51/-7.36	-6.51/-5.88	-5.65/-5.67	-6.01/-6.71	-7.71/-8.86	-10.01/-10.86	-11.76/-12.72	-13.3/-13.71	-13.82/-14.18	-14.85/-15.56	-16.22/-16.2	-15.23/-14.02	-12.99/-12.61	-12.75/-13.3	-14.03/-14.68	-15.77/-16.88	-16.69/-15.23	-13.64/-12.59	-11.98/-11.58	-11.46/-11.77	-12.51/-13.56	-15.25/-17.77
Θ (172.5°)	-19.02/-18.33	-14.46/-11.76	-9.76/-8.24	-7.15/-6.32	-5.74/-5.34	-5.02/-4.93	-5.05/-5.46	-6.12/-6.89	-8.4/-83	-11.1/-12.91	-14.52/-15.71	-15.9/-15.26	-14.12/-12.91	-11.87/-10.9	-10.05/-9.47	-9.14/-8.84	-8.5/-8.05	-7.68/-7.44	-7.27/-7.11	-7.12/-7.23	-7.62/-8.32	-9.42/-10.66	-12.58/-15.67	
Θ (180°)	-17.38/-17.72	-14.49/-11.49	9.46/-8	6.99/-6.2	5.67/-5.23	-4.92/-4.7	-4.72/-4.98	-5.41/-6.04	6.84/-7.79	-8.85/-10	-11.4/-12.91	-14.32/-14.94	-14.61/-13.62	-12.3/-10.81	9.46/-8.34	-7.44/-6.62	-5.76/-4.95	-4.31/-3.95	-3.76/-3.78	-4.08/-4.43	-4.74/-5.09	-5.72/-6.8	-8.25/-9.95	-12.42/-16.42
Freq(Hz)	2.4G/Pol	Theta/Ant. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-7.35/-7.82	-8.43/-9.09	-10.11/-11.33	-12.98/-15.27	-17.95/-18.86	-18.32/-18.35	-18.68/-17.34	-14.72/-12.88	-11.51/-10.28	-9.43/-8.77	-8.27/-7.75	7.56/-7.33	-7.42/-7.5	7.82/-8.33	8.93/-9.87	-11.26/-13.32	-16.4/-17.87	-17.87/-18.75	-17.73/-14.1	-11.74/-10.22	-9.12/-8.19	-7.48/-7.03	-6.81/-6.78	-6.82/-6.96
Θ (7.5°)	-7.51/-8.3	-8.28/-8.92	-9.78/-10.96	-12.5/-14.67	-17.31/-18.02	-18.72/-18.4	-18.96/-16.39	-13.85/-12.07	-10.67/-9.57	-8.77/-8.17	-7.67/-7.29	-7.05/-6.94	-7.06/-7.23	-7.61/-8.09	-8.83/-9.89	-11.46/-13.54	-16.6/-17.73	-18.05/-19.03	-18.15/-14.64	-12.45/-10.9	-9.71/-8.7	-7.91/-7.42	-7.16/-7.02	-7.03/-7.19
Θ (15°)	-7.53/-7.92	-8.53/-9.17	-10.16/-11.44	-13.71/-15.43	-18.34/-18.25	-18.35/-18.96	-19.12/-15.92	-10.42/-9.39	-8.94/-7.82	-7.27/-6.83	-6.59/-6.5	-6.53/-6.72	-7.08/-7.58	-8.38/-9.54	-11.14/-13.16	-16.16/-18.79	-17.79/-19.26	-17.76/-14.5	-12.38/-10.8	-9.6/-8.68	-8.03/-7.58	-7.26/-7.1	-7.07/-7.21	
Θ (22.5°)	-7.9/-8.38	-9.21/-10.08	-11.39/-13.01	-14.97/-17.52	-18.46/-18.81	-17.96/-18.17	-18.83/-15.82	-13.67/-12.18	-10.99/-9.9	-8.94/-8.27	-7.75/-7.39	7.11/-7.06	-7.11/-7.25	-7.56/-8.05	-8.85/-9.97	-11.52/-13.75	-17.14/-18.57	-17.88/-17.38	-15.4/-12.54	-10.68/-9.23	-8.33/-7.72	-7.41/-7.17	-7.1/-7.11	-7.18/-7.41
Θ (30°)	-8.98/-9.83	-10.39/-11.29	-13.82/-15.86	-18.24/-18.44	-18.98/-17.47	-18.6/-18.92	-19.37/-17.04	-14.98/-13.72	-12.28/-11.13	-10.22/-9.66	-9.16/-8.78	-8.55/-8.45	-8.55/-8.75	-9.2/-9.83	-10.73/-11.74	-13.23/-15.6	-19.41/-18.83	-19.1/-18.04	-13.83/-11.5	-9.37/-8.18	-7.51/-7.26	-7.29/-7.4	-7.67/-7.9	-8.15/-8.53
Θ (37.5°)	-10.22/-12.72	-13.75/-14.87	-16.4/-17.89	-18.4/-18.5	-17.87/-18.06	-18.44/-17.99	-17.54/-19.17	-16.24/-14.29	-12.84/-11.77	-11.05/-10.52	-9.88/-9.22	-8.68/-8.49	-9.26/-9.93	-10.78/-11.61	-12.58/-13.86	-15.63/-18.06	-17.24/-17.76	-18.94/-16.73	-13.18/-10.85	-9.39/-8.46	-8.7/-95	-8.31/-8.95	-9.77/-10.45	-10.95/-11.37
Θ (45°)	-14.38/-14.54	-14.77/-14.96	-15.32/-15.66	-15.55/-15.29	-15.39/-16.49	-19.16/-18.59	-17.86/-18.86	-16.82/-13.75	-11.71/-10.4	-9.56/-8.7	-7.68/-6.7	-6.17/-6.19	-6.63/-7.32	-8.18/-9.28	-10.78/-12.67	-15.07/-18.23	-18.49/-17.32	-18.98/-14.19	-11.18/-9.28	-8.16/-7.51	-7.19/-7.16	-7.48/-8.25	-9.47/-11.05	-12.55/-13.74
Θ (52.5°)	-18.21/-17.68	-16.97/-16.36	-15.91/-15.04	-13.68/-12.26	-14.14/-17.3	-18.48/-15.29	-17.41/-15.21	-12.16/-10.48	-9.53/-87	-7.39/-6.23	-5.75/-5.92	-6.3/-6.87	-7.78/-9.29	-11.38/-13.99	-17.03/-18.31	-17.69/-17.87	-12.65/-10.56	-8.39/-7	-6.23/-5.89	-5.89/-6.08	-6.49/-7.29	-8.56/-10.7	-13.08/-15.77	
Θ (60°)	-17.38/-19.27	-17.31/-18.75	-18.9/-17.01	-14.12/-11.69	-10.53/-10.5	-11.32/-12.87	-15.09/-18.07	-18.98/-16.16	-16.14/-15.43	-12.97/-11.33	-9.13/-7.56	-7.06/-7.13	-7.15/-7.53	-8.68/-10.69	-12.97/-14.84	-16.6/-17.72	-16.87/-14.53	-12.09/-10.02	-8.45/-7.34	-6.56/-6.16	-6.97/-6.63	-9.75/-11.81	-15.16/-17.26	
Θ (67.5°)	-18.45/-18.48	-18.34/-17.98	-18.75/-18.58	-16.08/-12.86	-11.33/-11.06	-11.42/-12.23	-13.42/-14.2	-14.06/-13.03	-11.59/-10.53	-9.64/-8.41	-6.98/-6.11	-5.98/-5.96	-5.96/-6.61	-8.18/-10.16	-11.87/-13.36	-15.07/-16.29	-15.98/-14.54	-13.16/-11.91	-10.68/-9.34	-8.17/-7.24	-6.85/-7.04	-7.85/-9.14	-10.88/-13.09	-16.45/-19.04
Θ (75°)	-18.88/-18.85	-18.38/-17.95	-17.82/-17.71	-16.98/-13.49	-12.06/-12.34	-13.48/-15.29	-17.94/-19	-19.31/-15.68	-12.71/-10.6	-9.37/-8.42	-7.38/-6.59	-6.22/-5.89	-5.76/-6.46	-7.8/-9.28	-10.54/-12.24	-14.05/-14.3	-13.69/-13.15	-12.8/-12.32	-11.35/-10.27	-9.43/-9.85	-8.8/-9.06	-9.91/-11.59	-14.47/-15.83	-18.65/-18.76
Θ (82.5°)	-16.05/-15.9	-17.3/-18.07	-17.11/-17.98	-13.5/-10.86	-9.76/-9.93	-10.99/-12.5	-14.73/-17.77	-18.44/-18.97	-18.21/-17.45	-14.82/-13.24	-11.66/-9.3	-8.69/-7.96	-7.93/-8.48	-9.34/-10.25	-11.78/-13.5	-13.83/-13.39	-13.46/-13.79	-13.91/-13.59	-12.9/-12.42	-12.3/-12.92	-14.07/-15.13	-16.43/-18.48	-17.88/-18.98	-18.21/-19.04
Θ (90°)	-12.71/-11.65	-12.4/-14.5	-16.8/-16.66	-14.26/-12.12	-11.02/-10.94	-11.82/-13.36	-15.82/-19.43	-19.11/-19.24	-17.98/-15.5	-14.22/-13.97	-13.25/-11.74	-10.73/-10.7	-11.11/-11.5	-11.9/-12.45	-12.98/-12.01	-11.08/-11.03	-11.04/-10.62	-10.52/-10.87	-11.45/-11.58	-11.42/-11.28	-11.34/-12.21	-13.96/-16.21	-19.16/-18.29	-18.62/-15.87
Θ (97.5°)	-14.99/-12.76	-12.41/-13.63	-15.28/-13.35	-13.41/-11.18	-9.98/-9.62	-9.96/-10.91	-12.61/-15.21	-18.84/-18.03	-18.03/-18.07	-16.41/-17.14	-17.1/-16.46	-16.09/-17.28	-12.72/-11.36	-10.02/-9.87	-8.53/-8.51	-8.14/-8.07	-8.67/-9.85	-11.19/-11.73	-11.69/-11.09	-10.98/-12.17	-14.65/-17.89	-15.81/-18.43	-19.24/-17.28	
Θ (105°)	-17.61/-15.84	-13.63/-13.25	-13.85/-13.94	-13.15/-12.19	-11.73/-11.79	-12.51/-12.91	-14.15/-15.78	-17.65/-18.16	-18.96/-17.93	-18.84/-17.74	-18.12/-19.2	-18.04/-17.65	-13.84/-11.97	-11.91/-11.81	-11.12/-10.24	-9.47/-9.35	-8.61/-10.89	-12.42/-13.63	-14.23/-14.39	-15.12/-18.36	-17.14/-17.14	-17.67/-17.72	-18.31/-16.71	
Θ (112.5°)	-14.47/-15.5	-16.29/-17.28	-18.28/-19.08	-17.3/-17.68	-19.02/-17.73	-17.7/-19.06	-17.68/-17.44	-17.61/-17.91	-19.43/-18.3	-17.47/-18.22	-16.26/-12.39	-11.21/-9.47	-7.41/-6.54	-7.05/-8.63	-10.19/-10.21	-9.62/-9.57	-10.01/-10.53	-11.25/-13.12	-16.48/-18.48	-18.98/-18.17	-18.87/-18.01	-18.9/-18.48	-18.02/-18.67	-18.39/-15.21
Θ (120°)	-10.17/-9.51	-10.02/-11.12	-13.22/-16.57	-17.53/-18.1	-19.18/-17.09	-17.03/-19.33	-17.47/-18.29	-19.37/-18.4	-18.32/-18.14	-17.6/-18.47	-19.59/-15.4	-13.79/-11.33	-8.61/-6.74	-8.63/-10.5	-11.28/-10.28	-10.2/-11.3	-12.37/-12.5	-12.99/-14.83	-16.4/-16.76	-16.88/-16.66	-15.38/-15.47	-15.22/-17.31	-19.12/-18.98	-16.42/-12.63
Θ (127.5°)	-10.79/-9.1	-8.8/-9.46	-10.84/-12.84	-14.95/-16.1	-15.81/-14.41	-13.63/-13.71	-14.4/-15.28	-16.51/-18.41	-18.08/-19.07	-17.73/-14.94	-12.76/-11.69	-10.61/-8.54	-7.09/-7.15	-8.32/-8.91	-6.28/-6.11	-9.02/-10.14	-10.75/-12.03	-13.12/-13.76	-14.31/-14.51	-13.44/-12.09	-11.91/-13.51	-17.01/-19.1	-17.75/-14.08	
Θ (135°)	-17.54/-14.86	-12.21/-11.01	-10.52/-10.44	-10.68/-11.29	-12.04/-12.38	-12.71/-12.28	-12.67/-13.27	-14.75/-17.42	-18.78/-18.63	-18.01/-15.49	-12.61/-11.25	-10.36/-9.07	-8.99/-8.13	-8.82/-9.09	-8.85/-9.23	-10.36/-11.01	-10.53/-10.03	-10.29/-11.26	-12.32/-12.88	-13.18/-12.95	-11.81/-10.5	-12.32/-12.02	-16.93/-17.96	-19.14/-18.31
Θ (142.5°)	-12.81/-12.8	-11.66/-10.28	-9.2/-8.56	-8.52/-9.02	-9.92/-11.02	-12.03/-12.95	-14.06/-15.87	-19.41/-19.39	-18.97/-18.11	-18.1/-17.44	-18.9/-17.13	-18.02/-18.59	-18.84/-18.95	-17.87/-13.9	-18.75/-18.86	-18.08/-15.79	-13.82/-12.92	-13.32/-14.72	-16.45/-17.78	-18.32/-17.59	-15.38/-13.67	-13.22/-14.49	-16.71/-15.77	-13.49/-12.44
Θ (150°)	-12.71/-11.93	-11.59/-10.9	-10.21/-9.81	-9.83/-10.24	-11.05/-12.17	-13.5/-15.05	-16.72/-18.98	-18.43/-19.06	-16.31/-14.4	-13.6/-13.43	-13.3/-12.61	-11.49/-10.47	-9.82/-9.52	-9.4/-9.5	-9.69/-9.93	-10.2/-10.57	-11.34/-12.93	-15.69/-19	-18.93/-17.85	-18.82/-19.14	-19.04/-16.65	-18.89/-19.1	-18.45/-18.51	-15.09/-13.05
Θ (157.5°)	-19.33/-18.48	-18.35/-17.29	-18.41/-18.36	-17.78/-18.18	-19.07/-17.34	-18.17/-18.94	-																	



Radiated Composite Gain Data of 2.4GHz

Appendix A

Θ(157.5°)	-18.23/-15.45	-12.31/-9.73	-7.62/-5.96	-4.66/-3.48	-2.55/-2.02	-1.94/-2.16	-2.56/-3.04	-3.66/-4.36	-5.11/-5.85	-6.46/-6.99	-7.61/-8.48	-9.77/-11.79	-15.03/-19.01	-17.82/-17.65	-12.55/-9.32	-7.08/-5.59	-4.71/-4.41	-4.62/-5.15	-5.63/-5.87	-5.86/-5.72	-5.72/-6	-6.56/-7.28	-8.29/-9.84	-12.62/-16.83
Θ(165°)	-17.15/-15.99	-12.45/-10.41	-8.94/-7.78	-7/-6.36	-5.82/-5.4	-5.42/-5.82	-6.52/-7.29	-7.97/-8.4	-8.68/-8.86	-9.18/-9.58	-10.44/-11.33	-12.44/-13.91	-15.86/-18.03	-19.06/-17.62	-18.44/-16.5	-15.46/-15.26	-15.87/-17.68	-17.98/-17.65	-19.01/-18.08	-16.94/-16.18	-16.58/-17.38	-17.78/-17.78	-17.91/-18.72	-17.78/-18.29
Θ(172.5°)	-18.08/-18.79	-13.76/-10.84	-8.76/-7.36	-6.34/-5.52	-4.75/-4	-3.42/-3.1	-3.03/-3.2	-3.61/-4.2	-4.96/-5.88	-7.01/-8.33	-9.91/-11.5	-13.13/-14.68	-15.82/-16.41	-16.61/-16.5	-16.39/-16.1	-15.28/-14.19	-12.78/-11.29	-9.75/-8.51	-7.62/-7.16	-7.28/-7.77	-8.38/-8.86	-9.33/-10.09	-11.15/-12.45	-14.5/-18.61
Θ(180°)	-18.05/-18.43	-16.29/-12.08	-9.48/-7.72	-6.55/-5.65	-4.81/-3.93	-3.21/-2.72	-2.48/-2.46	-2.67/-3.08	-3.61/-4.25	-5/-5.92	-7.05/-8.39	-10.02/-12.28	-15.03/-17.03	-16.71/-14.46	-12.1/-10.1	-8.41/-7.07	-5.85/-4.87	-4/-3.36	-3/-2.92	-3.16/-3.74	-4.39/-4.9	-5.47/-6.35	-7.65/-9.25	-11.47/-15.4
Freq(Hz)	2.4835GPol.	Theta/Ant. 3	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-6.38/-6.71	-7.18/-7.75	-8.67/-9.85	-11.42/-13.61	-16.31/-18.33	-18.49/-19.65	-16.63/-14.1	-11.92/-10.39	-9.08/-8.14	-7.36/-6.62	-6.13/-5.71	-5.52/-5.44	-5.63/-6.06	-6.76/-7.65	-8.83/-10.11	-11.82/-14.06	-17.25/-18.71	-18.18/-18.74	-15.67/-13.24	-11.41/-10	-8.9/-8.01	-7.26/-6.67	-6.25/-6.03	-5.97/-6.09
Θ(7.5°)	-6.2/-6.33	-6.68/-7.29	-8.14/-9.39	-10.96/-13.28	-16.66/-18.3	-18.29/-18.61	-14.78/-12.13	-10.15/-8.73	-7.62/-6.77	-6.2/-5.8	-5.53/-5.31	-5.24/-5.35	-5.69/-6.26	-7.09/-8.06	-9.23/-10.53	-12.16/-14.14	-16.66/-19.29	-18.14/-18.49	-17.45/-15.17	-13.31/-11.77	-10.44/-9.23	-8.19/-7.39	-6.8/-6.42	-6.23/-6.18
Θ(15°)	-6.39/-6.41	-6.8/-7.32	-8.14/-9.32	-10.95/-13.54	-17.57/-19.02	-18.09/-17.85	-14.18/-11.66	-9.75/-8.35	-7.18/-6.37	-5.86/-5.5	-5.22/-5.03	-5.02/-5.18	-5.63/-6.3	-7.23/-8.39	-9.77/-11.48	-13.39/-15.35	-17.7/-18.36	-17.83/-18.72	-17.94/-16.54	-15.14/-13.68	-12.29/-11.02	-9.81/-8.81	-7.98/-7.35	-6.9/-6.57
Θ(22.5°)	-6.32/-6.31	-6.63/-7.17	-7.9/-9.02	-10.72/-13.5	-18.12/-18.84	-18.98/-17.3	-13.81/-11.31	-9.48/-8.12	-6.95/-6.09	-5.45/-5.02	-4.66/-4.45	-4.5/-4.86	-5.43/-6.26	-7.29/-8.48	-9.91/-11.55	-13.55/-15.92	-19.16/-17.73	-18.23/-19.16	-16.67/-14.81	-13.27/-11.97	-10.86/-9.83	-9/-8.29	-7.68/-7.2	-6.81/-6.5
Θ(30°)	-6.33/-6.57	-7.01/-7.53	-8.2/-9.24	-10.87/-13.66	-18.47/-18.25	-18.15/-18.33	-14.33/-11.82	-9.85/-8.37	-7.2/-6.28	-5.56/-5.03	-4.59/-4.35	-4.38/-4.69	-5.17/-5.8	-6.54/-7.36	-8.39/-9.76	-11.7/-14.24	-17.39/-18.78	-18.35/-17.03	-14.28/-12.23	-10.6/-9.39	-8.55/-7.98	-7.54/-7.18	-6.86/-6.71	-6.6/-6.52
Θ(37.5°)	-7.9/-8.32	-9.04/-9.81	-10.61/-11.59	-13.13/-15.36	-18.12/-19.12	-18.68/-18.95	-15.88/-13.45	-11.46/-9.88	-8.59/-7.54	-6.85/-6.34	-6/-5.92	-6.1/-6.52	-7.07/-7.65	-8.17/-8.76	-9.76/-11.29	-13.68/-16.52	-17.88/-18.61	-18.07/-14.6	-11.96/-10.19	-8.98/-8.11	-7.67/-7.49	-7.41/-7.41	-7.48/-7.53	-7.63/-7.73
Θ(45°)	-9.3/-9.39	-9.82/-10.56	-11.24/-11.73	-12.07/-12.34	-12.65/-13.39	-14.37/-15.68	-17.21/-17.97	-16.75/-14.39	-12.09/-10.49	-9.61/-9.39	-9.59/-10.04	-10.67/-11.28	-11.95/-12.6	-12.87/-13.22	-14.2/-15.86	-18.13/-19.02	-18.18/-18.36	-17.65/-13.95	-11.64/-10.38	-9.61/-9.16	-8.92/-8.82	-8.94/-9.14	-9.32/-9.47	-9.51/-9.42
Θ(52.5°)	-9.79/-9.25	-9.12/-9.44	-9.6/-9.46	-9.22/-9.17	-9.55/-10.65	-12.18/-14.44	-17.82/-18.37	-18.82/-16.31	-12.22/-9.97	-8.95/-8.89	-9.08/-9.19	-9.33/-10.01	-10.87/-11.5	-11.93/-12.6	-13.78/-15.39	-18.34/-18.12	-18.17/-17.82	-14.86/-12.56	-11.23/-10.49	-10.06/-9.73	-9.51/-9.13	-8.91/-9.03	-9.49/-10.05	-10.18/-9.87
Θ(60°)	-14.31/-12.92	-12.09/-11.81	-11.58/-11.04	-10.23/-9.74	-9.91/-10.88	-12.4/-14.11	-16.37/-18.34	-18.69/-18.82	-14.47/-11.22	-9.81/-9.85	-10.16/-9.85	-9.79/-10.79	-12.11/-12.83	-13.33/-14.29	-16.14/-17.76	-18.09/-17.82	-15.4/-12.36	-10.83/-10.26	-10.19/-10.28	-10.24/-10.3	-10.45/-10.58	-10.72/-11.01	-12.13/-14.12	-15.56/-15.24
Θ(67.5°)	-18.02/-17.47	-19.17/-19.06	-18.65/-16.67	-13.77/-11.63	-10.71/-10.7	-11.51/-12.56	-13.72/-15.27	-17.91/-18.06	-18.06/-18.83	-18.37/-18.38	-17.83/-15.7	-15.89/-17.32	-17.35/-17.63	-17.44/-18.4	-18.46/-18.81	-15.67/-12.55	-10.83/-10.01	-10.01/-10.73	-11.74/-12.36	-12.3/-11.71	-11.26/-11.46	-12.09/-12.76	-13.81/-16.17	-17.95/-18.18
Θ(75°)	-17.6/-18.5	-17.59/-18.76	-17.98/-17.47	-15.99/-12.57	-11.33/-11.31	-12.35/-14.07	-15.82/-17.15	-17.7/-17.05	-15.32/-13.89	-13.36/-12.93	-11.42/-10.19	-10.1/-10.39	-10.55/-11.12	-12.61/-14.68	-15.74/-14.66	-13.26/-12.62	-12.44/-12.22	-12.3/-12.87	-13.06/-12.68	-11.93/-11.14	-10.73/-11.17	-12.6/-14.52	-16.31/-18.48	-17.74/-18.66
Θ(82.5°)	-17.68/-17.6	-18.67/-17.74	-18.94/-18.12	-14.51/-11.25	-9.87/-9.53	-10.3/-12.04	-14.54/-17.52	-18.79/-18.38	-17.89/-18.95	-16.54/-15.24	-13.22/-11.32	-10.87/-11.38	-11.68/-12.14	-13.39/-14.84	-14.7/-14.25	-14.85/-15.32	-14.32/-13.63	-13.82/-13.99	-13.63/-13.46	-13.92/-14.97	-16.72/-17.43	-17.45/-17.8	-18.54/-18.8	-17.82/-18.11
Θ(90°)	-11.46/-12.05	-13.35/-14.8	-15.78/-15.92	-14.43/-12.37	-10.94/-10.16	-10.22/-11.34	-13.1/-15.4	-17.69/-19.24	-19.71/-18.99	-17.94/-16.89	-15.17/-13.47	-13.16/-13.36	-12.87/-12.6	-12.95/-12.69	-12.47/-12.81	-12.73/-11.98	-11.87/-12.86	-13.6/-14.18	-15.15/-16.67	-18.01/-18.39	-19.2/-19.37	-17.29/-14.42	-13.16/-12.61	-11.92/-11.54
Θ(97.5°)	-10.49/-10.47	-11.05/-12.32	-13.5/-14.44	-15.01/-14.53	-13.47/-12.46	-11.85/-12.12	-13.13/-14.91	-17.14/-17.74	-17.74/-18.06	-18.04/-19.5	-18.15/-18.12	-17.72/-16.13	-13.79/-11.73	-10.23/-9.4	-9.17/-8.7	-8.05/-8.04	-8.78/-9.63	-10.54/-12.66	-16.15/-19.24	-17.65/-17.22	-17.06/-15.79	-14.89/-13.63	-12.79/-12.79	-12.5/-11.51
Θ(105°)	-12.38/-10.57	-9.24/-9.23	-9.89/-10.5	-11.24/-11.93	-12.27/-12.42	-12.34/-12.32	-12.85/-13.72	-14.53/-15.04	-16.69/-18.09	-17.58/-18.3	-16.98/-18.08	-18.4/-16.69	-12.89/-9.97	-8.58/-8.6	-8.91/-8.38	-7.93/-8.16	-8.53/-8.91	-9.95/-12.22	-14.69/-16.12	-16.54/-16.58	-18.14/-18.76	-18.91/-19.16	-17.87/-14.57	-13.82/-13.45
Θ(112.5°)	-12.92/-11.86	-10.06/-9.65	-10.87/-12.34	-13.48/-15.17	-17.98/-18.04	-17.95/-17.85	-17.56/-17.55	-15.5/-14.25	-14.56/-16.55	-16.68/-12.73	-10.16/-9.47	-9.65/-8.27	-5.92/-4.56	-4.68/-5.9	-6.76/-6.6	-6.58/-6.97	-7.42/-8.06	-9.47/-11.69	-14.02/-16.43	-18.64/-19.18	-17.86/-18.94	-18.8/-17.78	-17.43/-14.19	-12.42/-12.5
Θ(120°)	-12.19/-14.08	-14.92/-13.61	-13.96/-17.41	-18.75/-18.25	-18.78/-18.42	-16.42/-16.04	-16.25/-16.49	-16.28/-16.29	-17.78/-17.88	-18.71/-15.21	-11.85/-10.59	-10.32/-8.11	-5.38/-4.23	-5/-6.91	-7.73/-7.43	-7.87/-9.06	-10.2/-10.94	-12.2/-14.15	-16.06/-18.11	-18.39/-18.61	-18.34/-18.13	-19/-15.31	-15.18/-15.72	-13.76/-12.13
Θ(127.5°)	-7.92/-8.3	-9.28/-9.59	-9.86/-11.65	-15.45/-19.18	-17.77/-18.08	-16.28/-15.2	-14.85/-14.64	-14.8/-15.77	-17.22/-15.73	-12.25/-10.12	-9.45/-9.29	-8.33/-6.11	-4.52/-4.37	-5.46/-6.37	-6.27/-6.65	-8.17/-9.87	-10.5/-11.07	-12.52/-14.7	-17.15/-18.18	-18.2/-18.03	-18.07/-18.88	-17.95/-13.07	-11.48/-11.36	-10.71/-9.23
Θ(135°)	-10.59/-10.04	-10.36/-10.5	-10.5/-11.36	-13.51/-16.91	-19.08/-18.81	-18.17/-15.53	-13.52/-12.32	-12.32/-13.49	-14.48/-12.99	-10.52/-8.86	-7.97/-7.59	-6.98/-5.77	-4.76/-4.6	-5.07/-5.54	-6/-7.15	-8.89/-9.96	-10.12/-10.65	-11.98/-13.73	-15.61/-18.07	-19.09/-18.93	-18.1/-18.35	-17.91/-18.23	-18.19/-16.22	-14.17/-12.44
Θ(142.5°)	-8.9/-9.13	-9.72/-10.12	-9.95/-9.6	-9.96/-11.15	-12.94/-14.96	-16.26/-16.88	-16.73/-16.89	-18.12/-18.53	-15.3/-12.45	-11.37/-11.84	-12.83/-13.67	-13.96/-13.28	-12.24/-11.64	-11.53/-11.98	-13.17/-14.55	-14.36/-13.42	-13.19/-13.88	-15.03/-16.51	-18.15/-19.15	-17.68/-14.65	-12.12/-10.77	-10.8/-11.68	-11.49/-10.06	-8.91/-8.55
Θ(150°)	-7.06/-7.48	-8.24/-9.2	-9.76/-9.82	-9.99/-10.88	-12.56/-15.02	-18.12/-17.44	-18.26/-17.55	-19.09/-14.58	-11.57/-10.01	-9.76/-10.48	-11.65/-12.5	-12.15/-11.09	-9.95/-9.19	-8.87/-8.82	-8.63/-8.39	-8.47/-9.2	-10.83/-13.13	-16.62/-18.05	-18.07/-17.32	-19.27/-15.49	-12.78/-11.14	-10.23/-9.74	-9.06/-8.07	-7.21/-6.86
Θ(157.5°)	-12.1/-12.62	-13.82/-15.62	-17.71/-18.17	-18.26/-18.86	-18.1/-19.2	-18.55/-18.12	-18.04/-19.25	-16.06/-13.97	-12.53/-11.8	-11.65/-11.68	-11.49/-10.63	-9.43/-8.2	-7.27/-6.7	-6.57/-6.82	-7.2/-7.67	-8.44/-9.77	-11.67/-14.12	-16.73/-18.6	-17.94/-19.13	-18.9/-18.85	-19.39/-18.63	-17.74/-16.81	-15.45/-14.03	-12.82/-12.25
Θ(165°)	-17.9/-16.46	-15.51/-14.99	-14.82/-15.02	-15.58/-16.33	-16.79/-16.93	-17.04/-17.79	-19.05/-17.74	-18.85/-18.14	-18.53/-18.41	-18.89/-18.09	-17.88/-17.73	-19.05/-16.28	-14.32/-12.95	-12.34/-12.57	-13.64/-15.14	-16.55/-18.18	-18/-19.4	-18.31/-17.51	-16.76/-16.85	-17.04/-17.09	-16.97/-16.9	-17/-17.51	-18.16/-19.29	-18.91/-19.52
Θ(172.5°)	-7.92/-7.51	-7.36/-7.26	-7.44/-7.91	-8.65/-9.63	-10.78/-12.09	-13.81/-16.83	-17.75/-17.1	-18.08/-18.14	-17/-15.09	-13.99/-13.44	-13.14/-13.27	-13.67/-14.43	-15.52/-16.98	-18.46/-19.03	-18.8/-17.68	-17.01/-16.91	-17.06/-17.33	-17.9/-17.83	-18.73/-17.93	-16.55/-15.16	-13.68/-12.46	-11.42/-10.54	-9.75/-9.15	-8.75/-8.33
Θ(180°)	-6.09/-5.98	-5.96/-6.13	-6.58/-7.27	-8.2/-9.35	-10.55/-12.11	-14.12/-17.7	-18.29/-18.39	-19.67/-15.8	-13.26/-11.52	-10.35/-9.48	-8.7/-8.09	-7.64/-7.3	-7.22/-7.35	-7.64/-8.02	-8.34/-8.73	-9.27/-10.15	-11.51/-13.17	-15.72/-18.27	-18.44/-18.14	-17.69/-14.5	-12.24/-10.51	-9.11/-8.09	-7.33/-6.76	-6.45/-6.22